

Appendix Q – Biological Evaluation and Assessment

Biological Assessment

For

ESA Listed Terrestrial Wildlife Species

Canada Lynx (*Felis lynx*)
Gray Wolf (*Canis Lupus*)
Bald Eagle (*Haliaeetus leucocephalus*)

American and Crooked River Project
Red River Ranger District
Nez Perce National Forest

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BIOLOGICAL ASSESSMENT

Of Effects To

Threatened, Endangered, and Proposed Wildlife Species For The

AMERICAN and CROOKED RIVER PROJECT

Introduction

This biological assessment tiers to the Nez Perce Forest Plan and EIS (1987). It incorporates information from the the South Fork Clearwater River Landscape Assessment (SFLA) (1998) and the Draft American and Crooked River Environmental Impact Statement (ARCR DEIS) (May 2004) including references.

This biological assessment has been prepared to address the potential effects of the preferred alternative D as described here and in the Final Environmental Impact Statement for the American and Crooked River (FEIS) on Canada lynx, gray wolf, and bald eagle.

This document has been prepared in compliance with Section 7 of the Endangered Species Act of 1973 (as amended), 50 CFR 402.12, CFR 219.9 of the NFMA regulations, and Chapter 2670 of the Forest Service Manual. According to U.S. Fish and Wildlife Service list SP#1-4-04-SP 612 dated September 01, 2004 lists the Canada lynx, gray wolf, and bald eagle as known or suspected to occur on the Nez Perce National Forest. Notification of lynx listing as threatened was announced on March 24, 2000, and this analysis uses and applies the Conservation Measures criteria in the Canada Lynx Conservation Assessment and Strategy (LCAS 2000), along with LCAS-based habitat mapping criteria reviewed and clarified by the National Lynx Biology Team. Due to lack of occurrence of the grizzly bear on the Forest, the Fish & Wildlife Service has temporarily released the Forest from analysis requirements, thus grizzly bear and its habitat will not be discussed.

This biological assessment must be modified, and consultation reinitiated following concurrence by the USFWS, if: (1) activities other than those described under the Project Description section of this document are implemented; (2) new information becomes available that could influence the accuracy of the determination; (3) required mitigation is not implemented; (4) a new species is listed or critical habitat not addressed in this document is designated; or (5) the project in any way affects an ESA listed species to an extent not previously considered in this BA.

THE DECISION

The project will implement the preferred Alternative D of the American-Crooked River Project, with modifications including additional watershed improvements from Alternative E; this became the Selected Alternative, described below.

VEGETATION TREATMENTS

Up to 3,452 acres of timber harvest will occur. Appendix H of the Final EIS describes in detail all of the treatment types by unit for each action alternative. The selected alternative includes all of the units in preferred Alternative D, with the following exceptions. During additional analysis between the Draft and Final EIS, Units 99, 99.2, 105, and 329 (about 62 acres) were identified as meeting the Forest Plan criteria for old-growth. These units were dropped from consideration for harvest. Units 541, 542, and 543 were added to American River (112 acres).

Of the planned harvest acres, about 34 percent will be clearcut, and the remaining acres will be partially cut or thinned. Harvest methods include ground-based tractor (52% of the project acres) and cable systems (34%); the remaining acres (14%) are anticipated to be roadside salvage. This harvest is estimated to produce 25.4 million board feet (MMBF) of timber.

The transportation system proposed in Alternative D was adopted, with minor modifications, for the selected alternative. To facilitate timber harvest activities, an estimated 14.3 miles of temporary roads will be constructed. Each of these temporary roads will exist on the landscape for one to three years and will be decommissioned following timber harvest activities.

In addition to temporary roads, the selected alternative will require a combination of annual and deferred maintenance to prepare existing classified roads for timber haul. Maintenance will be required on about 90.5 miles of road. Of this roadwork, approximately 7.4 will be decommissioned after use and the remaining 83.1 miles will be maintained as part of the long-term transportation system for the analysis area. Table 2 (Table R-2 in the EIS) and Map 4a and 4b display the road maintenance and temporary road construction needed to facilitate timber removal.

Table 1. Vegetation Treatment Activities with the Selected Alternative

Proposed Activity – Total Project		Alt D
Acres of Treatment	Tractor Yard/Machine Pile	1813
	Cable Yard/Broadcast Burn	1173
	Roadside Salvage	466
	Total Acres Treated	3452
	Percent Clearcut	34%
	Percent Partial Cut/Thin	66%
Temporary road construction (miles) ¹		14.3
Road improvement (for timber harvest) (miles) ²		90.5

¹ Temporary roads will be decommissioned within one to three years of construction.

² Road improvement covers a range of activities, such as surface blading, drainage repair, and roadway brushing with occasional culvert installations, slump repairs, and stabilization work. Road widening could occur with major reconstruction. Road improvements stated in this table are not to be considered or confused with routine road maintenance that may include but not limited to road prism brushing, clearing, or hazard reduction activities.

WATERSHED IMPROVEMENTS

The watershed improvements proposed for Alternative D were adopted for the selected alternative.

A minimum of 19.0 miles of road will be eliminated from the transportation system through a variety of decommissioning methods. This road decommissioning is required as mitigation for the planned timber harvest in order to meet watershed objectives, and will be accomplished within 7-10 years of this decision. In areas where a road proposed for decommissioning is needed for timber harvest activities, the timber harvest activities will occur prior to the decommissioning.

Also included as part of the selected alternative, are the additional watershed improvements that were identified in Alternative E. These actions are not required as mitigation for the proposed timber harvest activities and are discretionary; they may be implemented as additional funds become available.

Table 2. Watershed Improvements with the Selected Alternative

Proposed Activity – Total Project	Required	Total Approved
Miles of decommissioned roads ¹	19.0	37.2
Miles of Watershed Road Improvements	16.6	24.6
Number of sites of Watershed Road Improvements	3	3
Stream crossing improvements ²	13	34
Miles of instream improvements	11.1	14.6
Miles of Recreation and Trail improvements	2.3	4.6
Acres of Recreation and Trail improvements	8.1	8.1
Access change for vehicle use - motorized trail use (ATV) to restricted use (miles) ³	1.0	1.0
Acres of Mine Site Reclamation	7	9
Acres of Soil Restoration	32	58

¹ Road decommissioning for this project covers a range of activities, from recontouring to abandonment due to grown-in conditions. It includes 7.4 miles of roads to be used for timber harvest and decommissioned upon completion of harvest activities. See Appendix F in the Final EIS.

² Stream crossing improvements include upgrading or improving culverts and bridges to improve fish passage and peak water flows and are listed as the number of sites.

³ This is an access change, which restricts use to two wheeled vehicles or snowmobiles over snow, from previous all terrain vehicle use (ATV).

SUMMARY OF THE PROPOSAL BY WATERSHED

The activities will be scheduled and implemented so that a balance will be achieved between vegetation and watershed improvement activities. The life of a typical timber sale contract is 7-10 years and all required activities would be completed in this time frame. There are three types of restoration activities 1) those road related activities and riparian plantings that can be completed separate from timber sale actions 2) road related activities that are needed for the timber sale activities and 3) Instream restoration projects which will require planning, designs, permits and additional funding. Type 1 activities will proceed once this decision is final and can be completed in advance or concurrent of the timber sale actions. Type 2 activities must be scheduled with the timber sale actions and coordinated in a way that will not impede either. These could continue through the life of the sale(s). The in channel work (type 3) requires planning, design work and permitting, all of which take time. Implementation of this work will occur within the time frame of the timber sale contract.

Table 3: American River Watershed, and Table 4: the Crooked River Watershed display the activities for the proposed action. Activities included under Alternative D modified are included for consideration under this BA. The tables below include Miles road Improvement and Miles of Watershed Road Improvement. Road improvement miles include activities designed to make the road usable for logging traffic. Activities would include blading, adding relief culverts, cleaning ditches, brushing etc. on roads that are mostly already stable. Miles of Watershed Road Improvement include similar activities but the road conditions will improve from a watershed perspective. The items listed under “Alt D modified discretionary”, are included for analysis and consultation under this BA. They are shown as discretionary and as such will be completed when and if funding becomes available. The items listed under “required” will be completed under this action.

Table 3. Activities in the American River Watershed.

Proposed Activity - American River		Alt D modified required	Alt D modified discretionary
Acres of Treatment	Tractor Yard/Machine Pile	841	
	Cable Yard/Broadcast Burn	239	
	Roadside Salvage	137	
	Total Acres Treated	1,217	
	Percent Clearcut	29%	
	Percent Partial Cut/Thin	71%	
Miles temporary road construction ¹		8.1	
Miles road improvement ²		33.9	
Miles of decommissioned roads ³		8.4	11.1
Miles of Watershed Road Improvement		7.4	
Number of sites of Watershed Road Improvement		0	
Stream crossing improvements ⁴		3.0	6.0
Miles of instream improvements		0	
Miles of Recreation and Trail improvements		1.6	0.8
Acres of Recreation & Trail improvements		0	
Acres of Mine Site Reclamation		0	
Acres of Soil Restoration		9.0	12.0
Access change for vehicle use - motorized trail use (ATV) to restricted use (snowmobiles over snow) ⁵		0	
Access change for vehicle use – road to trail ⁶		1.6	

¹ Temporary roads would be decommissioned within one to three years of construction.

² Road improvement covers a range of activities, such as surface blading, drainage repair, and roadway brushing with occasional culvert installations, slump repairs, and stabilization work. Road improvements stated in this table are not to be considered or confused with routine road maintenance that may include but not limited to road prism brushing, clearing, or hazard reduction activities.

³ Road decommissioning for this project covers a range of activities, from recontouring to abandonment due to grown in conditions. See Appendix F

⁴ Stream crossing improvements include upgrading or improving culverts and bridges to improve fish passage and peak water flows and are listed as the number of sites.

⁵ This is an access change, which restricts use to two wheeled vehicles or snowmobiles over snow, from previous all terrain vehicle use (ATV).

⁶ This is an access change of miles of roads to trails use.

Table 4. Alternatives in the Crooked River Watershed.

Proposed Activity - American River		Alt D modified required	Alt D modified discretionary
Acres of Treatment	Tractor Yard/Machine Pile	972	
	Cable Yard/Broadcast Burn	934	
	Roadside Salvage	329	
	Total Acres Treated	2,235	
	Percent Clearcut	36%	
	Percent Partial Cut/Thin	64%	
Miles temporary road construction ⁷		6.2	
Miles road improvement ⁸		56.6	
Miles of decommissioned roads ⁹		10.5	7.0
Miles of Watershed Road Improvement		9.2	8
Number of sites of Watershed Road Improvement		3	
Stream crossing improvements ¹⁰		10.0	15.0
Miles of instream improvements		11.1	3.5
Miles of Recreation and Trail improvements		0.7	1.5
Acres of Recreation & Trail improvements		8.1	
Acres of Mine Site Reclamation		7.0	2.0
Acres of Soil Restoration		23.0	14.0
Access change for vehicle use - motorized trail use (ATV) to restricted use (snowmobiles over snow) ¹¹		1.0	
Access change for vehicle use – road to trail ¹²		1.5	

⁷ Temporary roads would be decommissioned within one to three years of construction.

⁸ Road improvement covers a range of activities, such as surface blading, drainage repair, and roadway brushing with occasional culvert installations, slump repairs, and stabilization work. Road improvements stated in this table are not to be considered or confused with routine road maintenance that may include but not limited to road prism brushing, clearing, or hazard reduction activities.

⁹ Road decommissioning for this project covers a range of activities, from recontouring to abandonment due to grown in conditions. See Appendix F

¹⁰ Stream crossing improvements include upgrading or improving culverts and bridges to improve fish passage and peak water flows and are listed as the number of sites.

¹¹ This is an access change, which restricts use to two wheeled vehicles or snowmobiles over snow, from previous all terrain vehicle use (ATV).

¹² This is an access change of miles of roads to trails use.

Table 5. Culvert Activities Associated With Possible Take in Crooked River

Stream Name	Culvert Number	Road Number	Steelhead	Bull Trout	Sediment Plume Distance*	Selected (Yes or No)
Relief Creek.	2234	1803	X		300'	Y
Relief Creek	1964	9859	X		300'	Y
Relief Creek	1907	9876	X		300'	Y
Relief Creek	1926	9876	X		300'	Y
Baker Gulch	2092	233	X	X	300'	Y
Rainbow Gulch	2136	233	X	X	300'	Y
Quartz Creek	2340	233A	X	X	300'	Y
Quartz Creek	2341	233A	X	X	300'	Y
Sawmill Creek	2205	9836	N/A	N/A	N/A	Y
Silver Creek	2285	9836B	X	X	300'	Y
Crooked River	2371	9848	X	X	300'	Y

* Distance is a measure of stream gradient, size, and amount of disturbance or excavation.

Table 6. Instream and Culvert Activities Associated With Possible Take in Crooked River

Stream Name	Number of Structures	Steelhead (total age 1/2+ estimated)**	Bull Trout (total estimated)**	Sediment Plume Distance*	Selected (Yes or No)
Lower Crooked River	40	2740	35	300'	Y
Relief Creek	40	** .22/100m ²	** .04/100m ²	300'	Y
Crooked River Narrows	6	1808	22	300'	Y
Middle Crooked River	50	1449	24	300'	Y

- *Distance is a measure of stream gradient, size, and amount of disturbance or excavation.
- **Fish density from Clearwater BioStudies, (1990)
- ***Fish Density from IDFG Bull Trout Study SFCR (1999)

Table 7. Project Design and Mitigation Measures for the American and Crooked River Project

Design and mitigation measures would apply to all actions. Forest Plan standards and other Agency direction, along with information derived from monitoring past projects, were used to identify design and mitigation measures applicable to the action. Mitigation measures are practices used during implementation of the activities.

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
Areas Excluded from Timber Harvest or Fuel Reduction Activities			
1	No timber harvest or mechanical fuel reduction activities would occur in Forest Plan existing or replacement old growth, Inventoried Roadless Areas, streamside RHCAs, or high hazard landslide prone areas	NEPA project design, silviculture prescription, and field prep.	High, based available inventory and monitoring data
Vegetation			
2	Falling would be done to minimize breakage and damage to residual trees.	Field preparation, contract and contract administration/ inspection	High, based on sale administrators' observations
3	Silvicultural prescriptions would be written for each unit, including slash treatment and burn guidelines to meet Riparian Management Objectives	Silvicultural prescription	High, based on protocols for silvicultural certification
Riparian Habitat Conservation Areas			
4	No cutting of trees would be allowed in PACFISH default streamside or wetland RHCAs, except at temporary road crossings, instream habitat improvements, and to facilitate anchoring of cable yarding systems.	Field preparation, contract and contract administration/ inspection	High, based on inventory and monitoring data
5	Post harvest burning will occur in harvest units to reduce slash and fuel resulting from the harvest activities. The burning will be designed and implemented with the intent of restricting burning to stay within the unit boundary. Fire that moves outside the external unit boundary will be suppressed if it poses a threat to riparian resources. On occasion fire will move into small RHCA inclusions within the unit. Burning will not be ignited within these areas, but may be allowed to back into these areas under conditions where fire intensity will be low and burning will not result in extensive reduction in canopy cover or exposure of bare soil in these RHCA inclusions.	FS Fuels management	High, based on Research, PNW Lab, Starkey Project
6	Landslide prone areas are also considered Riparian Habitat Conservation Areas (RHCAs). No timber harvest would occur in areas of high landslide hazard, as described in (1) above. Timber harvest, road construction, or fuel reduction in areas of moderate landslide risk would be modified as needed	NEPA project design, silviculture prescription, and field prep.	High, based on landslide inventory data

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
	to protect slope stability. If additional, unmapped landslide prone areas are found during project implementation, areas would be dropped or activities would be modified with watershed specialist oversight to protect slope stability.		
Soils, Water Quality, and Fish Habitat			
7	Planned activities would be modified in any proposed timber harvest or fuel reduction unit that is found to have previously unidentified significant soil impacts from past human-caused disturbance. The planned activities in that unit would be modified or dropped, or post-harvest restoration implemented to ensure that cumulative impacts would not exceed Forest Plan soil quality standard number 2 (percent of area detrimentally impacted upon completion of activities). Site-specific review of treatment units prior to implementation would identify extent of detrimental soil disturbance.	NEPA project design, silviculture prescription, and field prep.	Moderate, based on research and forest monitoring data (Cullen et al., 1991, Froelich et al., 1983, USDA FS 1988B, 1990, 1992, 1999, and 2003D).
8	Timber harvest and fuel reduction activities would be coordinated with soil restoration activities for greatest efficiency.	Contract administration	Expected to be moderate, little data.
9	Broadcast burning would be applied in preference to excavator piling wherever practical to reduce physical soil damage and to encourage natural regeneration.	NEPA project design, silviculture prescription, and contract.	High, to the degree implemented; based on forest monitoring data (USDA FS 1988B, 1990, 1992, 1999, and 2003D).
10	Temporary roads would be built, used, and decommissioned within a 1 to 3-year period, in order to reduce the amount of sediment production. Coordination of temporary road use and decommissioning with the BLM Eastside Township project would be required.	NEPA project design and contract administration	Moderate, based on implementation monitoring of timber sale contracts and Burroughs and King, 1989.
11	New, temporary roads would be constructed using minimal road widths and out-sloped surface drainage. Road cuts, fills, and treads would be stabilized with annual grass cover where roads are held more than one year. Temporary roads would be located to avoid live water and high-risk landslide prone terrain. If avoidance of live water is not possible, stream crossings would be designed consistent with criteria described below and in Forest Plan Amendment 20 (PACFISH)	Contract and contract administration/inspection	High, based on literature (Water/Road Interaction Technology Series, USDA Forest Service, San Dimas Technology and Development Program, 1999; Burroughs and King, 1989)

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
12	Coarse woody debris greater than 3 inches diameter would be retained in timber harvest or fuel reduction units in amounts to meet guidelines in Appendix K .	NEPA project design, silviculture prescription, contract, and contract administration.	High effectiveness, based on Graham et al., 1994 and Harvey et al., 1987. Implementation effectiveness has not been monitored.
13	Minimize whole tree yarding. Whole-tree yard boles only, leaving tops and limbs on site, to maintain foliar nutrients. Overwinter slash at least one winter to allow nutrients to leach into the soil.	NEPA project design, silviculture prescription, BD plan, and contract.	High (Garrison and Moore, 1998; Moore et al., 2004)
14	Winter harvesting would only occur during frozen conditions. Frozen conditions are defined as greater than 4 inches of frozen ground, a barrier of snow greater than two feet in depth (unpacked snow), or one foot in depth (packed snow).	Contract administration	Moderate, based on forest monitoring data (1987 report in project file)
15	Timber harvest, fuel reduction, and soil and stream restoration activities would be limited or suspended when soils are wet, such that resource damage may occur, to reduce rutting, displacement and erosion.	Contract and contract administration/inspection	Moderate, based on forest monitoring (USDA FS 1988B, 1990, 1992, 1999, and 2003D).
16	Skid trails, landings, and yarding corridors would be located and designated to minimize the area of detrimental soil effects. Tractor skid trails would be spaced 80 to 120 feet apart, except where converging on landings, to reduce the area of detrimental soil disturbance. This does not preclude the use of feller bunchers if soil impacts can remain within standards.	Contract and contract administration/inspection	Moderate, based on forest monitoring (USDA FS 1988B, 1990, 1992, 1999, and 2003D).
17	On excavator piled units, additional trail construction would be minimized, machines would be restricted to existing trails as much as possible, number of passes would be minimized, and excavator piling would be minimized, to reduce soil compaction. Numerous small piles are preferred to few large piles to avoid nutrient losses and soil alteration that favor weed invasion.	Contract and contract administration/inspection	Moderate, based on forest monitoring (USDA FS 1988B, 1990, 1992, 1999, and 2003D).
18	Cable systems would use one-end or full suspension wherever possible to minimize soil disturbance.	Contract and contract administration/inspection	High where implemented (USDA FS 2003A; Krag, 1991)
19	Excavated skid trails and landings with cut slopes of more than 1 foot would be scarified and recontoured, replacing topsoil as feasible on all landings and trails not needed for harvest within the next 15 years. Winged	Contract and contract administration/inspection	High (Plotnikoff et al., 1999; Sanborn et al. 1999A, Sanborn et al.,

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
	subsoiler, excavator, or similar equipment is preferred to restore permeability and soil structure.		1999B)
20	Fine organic matter and slash would be scattered over recontoured or scarified areas on skid trails, decommissioned roads, and landings with a goal of achieving 10 tons per acre of fines and 15-20 tons per acre of larger material, up to 35 tons total where available and acceptable to fuel managers. Water bars and seeding of approved weed-free annual or native species would be added as needed for supplementary erosion control.	Contract and contract administration/inspection	High (Sanborn et al., 1999A)
21	Soil restoration areas would be stabilized within 14 days, using erosion barriers, slash, or mulch as needed. Any soil restoration in an activity area would be completed within one operating season, with allowance for additional planting in subsequent seasons.	Contract and contract administration/inspection	Moderate, based on past experience.
22	Non-excavated skid trails and landings not needed for harvest within the next 15 years, that have been cut, compacted or entrenched 3 inches or more would be scarified to a depth of 4 – 10 inches, or as directed by contract administrator, to restore soil permeability. Excavator, winged subsoiler or similar equipment is preferred, to avoid mixing surface ash layer and subsoil.	Contract and contract administration/inspection	Moderate to high (Froelich et al., 1983; Froelich et al, 1985;Foltz and Mallard, 2004; Luce, 1997)
23	Sediment and erosion control measures such as dewatering culverts, sediment barriers, rocking road surfaces and/or ditches, etc., would be used as needed when constructing, reconstructing, and decommissioning roads to protect fish habitat and water quality.	Contract and contract administration	High, based on literature, San Dimas, Road/Water Interaction
24	Activities including stream crossing road improvements would be conducted in fish bearing streams between July 1 and August 15 to avoid sediment deposition on emerging steelhead or Chinook redds, or disturbance to bull trout moving to natal streams. These dates may be site-specifically adjusted through coordination with the Central Idaho Level I team and other agencies.	NEPA project design, contract and contract administration/inspection	Moderate to high, based on past experience.
25	Stream crossing structures would provide for channel width, flow velocities, substrate condition, and stream gradients that approximate the natural channel and accommodate passage of streamflow, debris, fish, and other aquatic organisms, and would use PACFISH standards. When designing new structures, consider and give preference to open-bottom arches, bridges and oversized culverts.	NEPA project design, contract and contract administration/inspection	High, based on literature, San Dimas, Road/Water Interaction

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
26	During instream habitat improvement activities, tree felling in RHCAs would occur only where that activity would not affect Riparian Management Objectives for shade and woody debris recruitment. Wood for instream placement would be taken from outside the RHCA wherever feasible.	Contract and contract administration/inspection	High, based on past experience.
27	Prior to instream habitat improvement activities, heavy equipment would be inspected to assure no leakage of oil, fuel, or hydraulic fluid.	Contract and contract administration/inspection	Moderate to high, based on past experience.
28	A Spill Prevention Control and Countermeasures Plan (40 CFR 112) would be prepared and implemented that incorporates the rules and requirements of the Idaho Forest Practices Act Section 60, Use of Chemicals and Petroleum Products; and US Department of Transportation rules for fuels haul and temporary storage; and additional direction as applicable.	Contract and contract administration/inspection	High, based on past experience.
29	For instream activities in fish-bearing streams that contain listed species, fish are expected to disperse from the activity area. If needed, additional measures would be used to ensure fish are not harmed or killed by instream activity. If electrofishing were necessary, it would be conducted in accordance with NOAA Fisheries electrofishing guidelines found at http://www.nwr.noaa.gov .	Contract and contract administration/inspection	Moderate, based on past experience.
30	The State of Idaho Best Management Practices (BMPs) and Forest Service Soil and Water Conservation Practices (SWCPs) would be applied. These are incorporated by reference.	Contract and contract administration/inspection	High, based on past experience.
Trails/Recreation			
31	Coordination would minimize conflict with winter hauling on roads used as groomed snowmobile routes.	Project design, contract and contract administration/inspection	Moderate, based on past experience.
32	Trails 820, 832, 838, 844, 848, and others as identified, would be protected during activities. Designate all system trails as Protected Improvements in the Timber Sale Contract. No skidding across trails, except over snow, fall trees away from trails, cut stumps less than 12" in height within 100 feet of trails, leave regeneration within 100 feet of trails to create a visual buffer between treatment areas and trails, construct firelines to protect the regeneration buffer and trail during slash treatment, and trails are not to be used a	Contract and contract administration/inspection	High, based on past experience.

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
	firelines.		
Access/Public Safety			
33	Temporary roads would be closed to public use, except as specifically authorized.	Contract and contract administration/inspection	Moderate for sediment reduction and wildlife security, based on monitoring
34	Operator would be required to set up warning signs advising of equipment operations or hazards for public safety.	Contract and contract administration/inspection	High, based on past experience.
Air Quality			
35	Procedures outlined in the North Idaho Smoke Management Memorandum of Agreement would be followed, including restrictions imposed by the smoke management-monitoring unit.	FS fuels management	High, based on burning approval required daily by smoke monitoring unit.
36	Prescribed burning would be conducted over several years to reduce the amount of smoke in any one year. Priority in scheduling would be given to units accessed by temporary roads scheduled for decommissioning	FS fuels management	High, based on past experience, and availability of burn windows and/or personnel.
37	Additional restrictions, beyond those imposed by the smoke management-monitoring unit, would be considered for prescribed burning for local air quality reasons, including visual.	FS fuels management	High, based on past experience.
Wildlife			
38	Snag and snag replacement green trees would be retained in numbers consistent with Regional Guidelines (Appendix K)	Field preparation , NEPA project design, contracting and contract administration	High except where safety concerns or wood cutting result in loss.
39	Should any of the following be sighted in the project area during project layout and implementation, the U.S. Fish and Wildlife Service and unit biologist would be notified: lynx or a lynx den, bald eagle, new wolf den or rendezvous site, active goshawk nest. Appropriate protection measures would be implemented where deemed necessary to protect these species.	NEPA project design, silvicultural prescription, field prep, contract administration/inspection, and USFWS monitoring	Moderate; based on public sightings reports and ESA section 7 consultation.
40	Should an active goshawk nest be discovered within a 450 feet distance of timber harvest or fuel reduction activities, the nest tree will be protected, as	Field prep, contract and contract administration/	Moderate; based on IDFG, et al, 1995,

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
	well as a 30 acre no-treatment buffer area around the nest tree, as designated by the unit biologist to provide for foraging and nesting sites.	inspection	State Conservation Effort
41	The integrity of existing access management restrictions would be maintained within the planning area for wildlife security purposes. Current access management restrictions would apply to existing reconstructed roads after implementation of activities to maintain or improve existing access and wildlife security. No contractor or their representatives may use motorized vehicles to hunt or trap animals on a restricted road.	Contract and contract administration/inspection	High except close to roads; based on standard timber sale contract clauses and past results monitoring
Heritage Resources			
42	Known historic properties or sites would be avoided or protected.	NEPA project design, field prep, contract, and administration/inspection	High, objective to achieve a “no adverse effect” on these resources
43	If additional cultural resources are discovered during project operations, all ground-disturbing activities in that area will be halted until such resources can be properly documented and evaluated by the Forest Archaeologist in compliance with 36 CFR 800.13b3	Contract and contract administration/ inspection	Moderate based on recognition of resource and contact with Heritage personnel
Noxious Weeds			
44	Desirable vegetation would be promptly established on all disturbed areas, using native and non-native plant species, as approved by the Forest botanist.	Contract and contract administration/inspection	Moderate based on experience
45	All named plant cultivars used in revegetation will be certified blue-tagged. All non-certified seed will be tested by a certified seed laboratory against the all state noxious weed list and documentation of the seed inspection test provided to the contract administrator. All straw and mulch would be certified as free of noxious weed seed.	Contract and contract administration and inspection	High, based on experience
46	All mud, soil and plant parts would be removed from all off-road equipment associated with the project before moving into the project area to limit the spread of weeds. Cleaning must occur off National Forest lands. This applies to all ATVs used on and off roads in the project area, but does not apply to service or hauling vehicles that would stay on the roadway, traveling frequently in and out of the project area.	Contract and contract administration and inspection	High; based on past experience
47	All private rock used for surfacing would be county-certified as free of noxious weed seed. Forest Service rock sources will be reviewed for	Contract and contract administration/ inspection	Moderate; based on past experience

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
	invasive weeds by a forest weed specialist or botanist. Borrow pits and stockpiles will not be used if it is determined that it is infested with an invasive plant that is not found in the area where the material will be placed.		
48	All small outbreaks of invasive weeds within the project risk zones (Map 16b), and along all haul routes leading to weed risk zones will be pretreated prior to ground disturbing activities under the existing weed management program.	Field prep, contract	High: based on past experience
TES Plants			
49	Candystick, a former Region 1 sensitive plant species, occurs in some management units. Where live lodgepole are associated with candystick, groups of live lodgepole pine would be left to protect candystick from management activities.	NEPA project design, field prep, contract and contract administration/ inspection	High based on past monitoring and experience.
50	During implementation, if activities would impact previously unknown sensitive plant occurrences, appropriate protection measures would be implemented. Appropriate measures will vary depending upon the ecology of the species involved and nature of the proposed action and would be directed by a botanist.	Silvicultural prescription, field preparation, contract, and contract administration/inspection	High based on monitoring, experience, and logic.
Roadside Salvage¹³			
51	Roadside salvage would be limited to dead or dying trees, with no harvest of standing trees more than 20 inches in diameter. (Windthrown trees would not be subject to the diameter limit.)	Contractor permit	High; based on based experience and accessibility to sites
52	Salvage would be limited to areas adjacent to haul roads. No tree cutting or yarding would occur in RHCAs or in allocated existing or replacement old growth.	Contractor permit	High; based on based experience and accessibility to sites
53	All yarding would be done from the road. Areas above steep cutslopes that cannot be protected from yarding damage would be omitted from salvage. Yarding distance would not exceed 100 feet.	Contractor permit	High; based on based experience and accessibility to sites
54	No more than 80 dead or dying trees per mile (approximately 8 trees/acre) could be designated for cutting on each side of the road.	Contractor permit	High; based on based experience and accessibility to sites
55	Maximum opening size is one acre on each side of a road, or a maximum of 400 feet	Contractor permit	High; based on based

¹³ Treatments would include roadside salvage within 100 feet of main haul roads. This component of the action would comply with all applicable design criteria developed for the action as a whole. These design criteria are not intended to limit or interfere with brushing, clearing, or hazard reduction activities associated with routine road maintenance.

#	Project Design and Mitigation Measure	Implementation Method	Effectiveness
	along the road.		experience and accessibility to sites
56	Openings would be separated from other forest openings by at least 200 feet of pole size or larger forest along the road, on both sides, to provide cover for wildlife crossing.	Contractor permit	High; based on based experience and accessibility to sites
57	Slash from salvage would be lopped and scattered, hand piled and burned in the woods, or removed from the site at the discretion of the District Ranger considering the Forest objective of maintaining less than 12 tons per acre of fine fuels.	Contractor permit	High; based on based experience and accessibility to sites

DESCRIPTION OF PROJECT AREA

The analysis area is composed of approximately 39000 acres within American River and Crooked River drainages which occur north and south of Elk City, Idaho. The analysis area lies within Township 28 and 30 North by Range 7, 8 and 9 East, Boise Meridian. Mountain pine beetle infested stands of mid and late-seral lodgepole pine is predominant, with intermixed stands of mixed conifer and lodgepole pine scattered across the landscape.

SPECIES DESCRIPTION AND HABITATS

LYNX

Canada lynx have been federally listed as a threatened species and is also a Region 1 sensitive species. Although lynx have sometimes been portrayed as a late-successional forest species, lynx appear to be more closely associated with a mosaic of late- and early-successional stages (Roloff 1995).

No formal surveys for actual lynx occupation on the Forest or the analysis area have been completed to date, but confirmed reports and unconfirmed sightings of lynx presence have been documented within the Forest boundary. Lynx analysis unit (LAU) delineations and habitat mapping actions directed by the Canada Lynx Conservation Assessment and Strategy (LCAS, 2000), have been completed for the entire Forest including the project area.

Most of the American and Crooked river project analysis area contains no designated lynx habitats (refer to the updated lynx habitat map dated January, 2004). However, the overall project analysis area does partially overlap portions of two large lynx analysis units (LAUs #3020306 and #3050401) that may be partially affected by some of the harvest units or project actions.

Lynx habitat mapping of the Nez Perce Forest has undergone recent adjustments as recommended by the National Lynx Biology Team. Their recommendations were based on an on-site field review conducted in October, 2003. The Conservation Measures and mapping direction in the Lynx Conservation Assessment and Strategy (LCAS), and the most recent changes to the Forestwide lynx habitat map (Forest GIS file:c:\fsfiles\gis\projects\lynx_habitat\lynx_habitat.mxd 20 April 2004), per direct review and adjustments by the National Lynx Biology Team – Oct., 2003, are used and applied in this analysis. Very little designated lynx habitat occurs within the American-Crooked project area.

Lynx habitat conditions and acreage within LAUs within the American-Crooked Project

LAU	Total Habitat Acres	% Denning	% Foraging	% Unsuitable	Drainage
3020306	19,764	18	81	1	American
3050401	25,469	27	72	1	Crooked

Currently, both LAUs have ample denning habitat (above the 10% LCAS guideline), and neither LAU has enough mapped "unsuitable" habitat to be of concern with respect to the LCAS 30% limit on conversion of suitable to unsuitable habitat.

GRAY WOLF

During 1995 and 1996 wolves were reintroduced into central Idaho. Gray wolves are large, wide-ranging carnivores which have recently populated the American/Crooked planning area. Within the state, wolf populations have multiplied dramatically based on monitoring results, and continue to approach and maintain recovery population levels. Recovery decisions from the 1995 EIS and reintroduction decision have modified the status of wolves within the Nez Perce National Forest including the overall planning area to an "experimental/nonessential" (Section 10J) status. Wolves have populated the entire Nez

Perce National Forest quickly and thoroughly. There are now 5 confirmed wolf packs within and around the perimeter of the American and Crooked river project area.

There are currently a total of at least 20 active packs in the Central Idaho Wolf Recovery Area. The Wolf Reintroduction Final Rule (Federal Register Nov. 22, 1994) stated that, “when six or more breeding pairs are established in an experimental population area, no land-use restrictions may be employed outside of national parks or national wildlife refuges, unless wolf populations fail to maintain positive growth rates toward population recovery levels for 2 consecutive years”. Currently, wolf populations locally are increasing.

Based on most recent Forest Plan populations monitoring and statewide monitoring results, wolf populations are at or exceed recovery levels now. The Red River Ranger District is home to 5 confirmed wolf packs. Relative to the American-Crooked River proposal, only one known wolf den is known to exist in the analysis area. The nearest harvest unit is just over 2 miles to the east of the den site. Though denning and rearing take place in early spring/summer, proximity of the harvest unit and related activities is not expected to interfere with denning or rearing at this location. In addition, the “no land-use restrictions may be employed” provision of the Wolf Reintroduction Final Rule is now applicable to wolves throughout the entire Nez Perce Forest including the project area.

Management of quality wolf habitat is largely dependent on availability of an ample supply of large ungulate prey such as deer, elk and moose. Maintenance of quality ungulate habitats is fundamental to maintaining quality wolf habitats in the long term. Based on confirmed wolf numbers (7 packs on the Forest), recovery criteria have been met for wolves in Central Idaho. Wolf numbers continue recovering.

In 2003, a new pack denning site was identified within the American River drainage. During this year also, a new rendezvous area within the Crooked River drainage was identified by Nez Perce Tribe wolf recovery crews.

BALD EAGLE

Bald eagles are large, endemic representatives of the fish or sea eagle family. In Idaho, wintering bald eagles occur near open water throughout the state (USDI, 1986). No bald eagle occupation is known within the American/Crooked analysis area. No bald eagle nesting is known to take place anywhere on the Nez Perce Forest or within the South Fork Clearwater River subbasin. Bald eagles occupy the lower and middle elevations of the South Fork Clearwater River during winter and early spring, from Mill Creek to Lightning Creek due to availability of ungulate carcasses there and relatively ice-free river conditions during winter. Sites most commonly used are at least 20 miles downstream from the analysis area. Due to ice-up of the South Fork Clearwater river at higher elevations in winter and lack of fish and waterfowl availability, relatively little or no use of the analysis area drainages occurs by bald eagles during most winters.

Population trends across the forest as a whole indicate local population trends on the Forest are stable or slightly increasing (Nez Perce NF 12th Annual Monitoring and Evaluation Report, 1999, p. 16-17). In Idaho, bald eagles scavenge on deer and elk carrion from nearby winter ranges during winter. By late spring in Idaho, fish may become more predominate in the diets of bald eagles (USDI, 1986, p.19).

Increasing and maintaining early seral habitat by reducing conifer densities on low elevation big game winter ranges is a high conservation action priority (South Fork Clearwater River Landscape Assessment, p. 102-103 and Meadow Face Ecosystem Analysis at the Watershed Scale, p. 64). There is virtually no low elevation big game winter range within the analysis area, however indirect effects of upriver actions including harvest activities on private lands, may have limited secondary impacts to anadromous fish and waterfowl habitats along the river's lower elevations.

INVENTORIES AND SURVEYS:

LYNX

Actual lynx occupation of the analysis area is assumed but uncertain. A few unconfirmed lynx sightings have occurred within or near the project area. No formal surveys for lynx have been conducted within the

analysis area to date. Designated lynx habitat is very limited within the project analysis area occurring only in the southern-most portion of the Crooked River drainage, and the northeastern portion of American River.

GRAY WOLF

The reintroduction and new "experimental/nonessential" Section 10(j) status of the wolves, have reduced the need for surveys of individual wolves. Primary recovery efforts now focus on packs, dens, and rendezvous area occupation. Such surveys have been limited, however the Nez Perce Tribe monitors radio-collared wolves and sightings or multiple animal sign or sightings continue to be documented. The result of the 1995-96 Central Idaho reintroductions have yielded successful reproduction of wolves throughout the state. Wolf recovery has been achieved within the state of Idaho. Wolves remain federally listed however.

BALD EAGLE

Bald eagles use the lowest elevations of the analysis area in winter months. Winter bald eagle monitoring counts are conducted annually on the South Fork Clearwater River and other major rivers in the general area. Based on mid-winter surveys, bald eagle numbers have generally maintained or increased along the South Fork Clearwater River since 1984 (Nez Perce NF 10th Annual Monitoring & Evaluation Report, p. 14). Bald eagle population status in the western U.S. has improved to the point that they are being considered for federal delisting by the U.S. Fish & Wildlife Service.

ANALYSIS OF EFFECTS

LYNX

The South Fork Clearwater River Landscape Assessment management theme for both American and Crooked River drainages proposes to "produce early seral habitat" as a very high priority, and identifies treatment objectives which include "creating forest openings by fire or timber harvest". From the perspective of the landscape assessment, the goal to benefit lynx habitat would be to "create dense stands of deciduous brush and young conifers, attractive to snowshoe hare". Despite substantial past harvesting in the analysis area, advanced regeneration of trees and cover in plantations has maintained habitat connectivity and travel corridors as defined for lynx in the analysis area. Habitat management for lynx primarily addresses maintenance or improvement of vegetation structure for lynx and their prey.

Lynx are considered relatively tolerant of human presence and activities. Preliminary information (from the Lynx Conservation Assessment & Strategy (2000), page 7-10), suggests that lynx may not avoid roads, except at high traffic volumes. Therefore, at this time, there is little compelling evidence to recommend management of road density to conserve lynx.

Several important landscape vegetation limitations must be followed when conducting timber harvest and fuel reduction actions in designated lynx habitats in order to comply with measures in the Lynx Conservation Assessment and Strategy, 2000 (LCAS). LAUs must maintain at least 10 percent denning habitat, unsuitable acres created cannot exceed the total 30 percent maximum threshold, and no more than 15 percent of the suitable habitat can be converted to unsuitable within a decade.

Both LAUs within the project area currently hold more than 10 percent denning habitat and neither LAU is near the 30 percent maximum unsuitable habitat threshold. For this reason, since denning habitat is relatively abundant, and unsuitable habitat acres (before planned harvest), are well below LCAS thresholds, there is ample opportunity for creation of lynx foraging habitat while staying within all LCAS guidelines. The analysis criteria for lynx and their habitats will be relative amounts of suitable condition lynx habitats that are converted to early seral foraging habitat condition while meeting all LCAS measures.

The preferred alternative (D), would directly affect 47 acres (1%) of denning and 204 acres (1%) of foraging habitat in LAU #3020306 which amounts to a total of 1% of the available lynx habitat. Such harvest would be assumed to convert 1% from suitable to unsuitable. Over 98% of the lynx habitat in this

LAU would remain in suitable condition after harvests. Remaining denning habitat would amount to over 17%, well in excess of LCAS 10% minimums. No precommercial thinning takes place.

The preferred alternative (D), would directly affect 253 acres (3.5%) of denning and 947 acres (5%) of foraging habitat in LAU #3050401 which amounts to a total of 5% of the available lynx habitat. Such harvest would be assumed to convert 5% of lynx habitat from suitable to unsuitable. Over 95% of the lynx habitat in this LAU would remain in suitable condition after harvests. Remaining denning habitat would amount to over 24%, well in excess of the LCAS 10% minimum. No precommercial thinning takes place.

LYNX: LCAS CRITERIA CHECKLIST:

Fire-related Conservation Measures

Prescription fire (when applied in lynx habitat) is used as a tool to maintain or restore lynx habitats by moving toward landscape patterns consistent with historical succession and disturbance regimes. True ☒ False ☐ NA ☐ Mechanical pre-treatment followed by ignitions, if needed to restore fire as an ecological process, have been considered. Yes ☒ No ☐ NA ☐.

All planned burns in harvest units are in lodgepole pine or mixed conifer habitats with 60-65% lodgepole pine. Fire is the dominant disturbance regime in these forest types.

If more than 30% of lynx habitat within a LAU is currently in UNSUITABLE CONDITION, no further reduction of suitable conditions occurs as a result of vegetation management activities by this project. True ☒ False ☐ NA ☐ (NOTE: This criteria may be waived if better guidance is available resulting from a local, broad-scale landscape assessment of historical processes, vegetation patterns, age class distributions, etc.)

LAUs are anywhere near the 30% threshold for unsuitable habitat and the preferred alternative does not harvest enough in designated lynx habitat to change that.

Within the project's LAU(s), the planned action maintains potential denning habitat on at least 10% of the area that is capable of producing stands with these characteristics. Yes ☒ No ☐

Denning habitat is very abundant and well in excess of 10% on both LAUs (see table above). No action reduces denning habitats below 10%.

Habitat connectivity within and between LAUs is maintained. Yes ☒ No ☐ NA ☐

Planned harvest units and fuel reductions help to reduce localized fuel loading in treatment sites, maintaining habitat connectivity within or between LAU's consistent with historical landscape patterns.

Prescription burns in aspen or lodgepole pine types are designed to regenerate or create snowshoe hare habitat. Yes ☒ No ☐ Not Applicable ☐

Post-harvest fuel treatments will regenerate dense lodgepole pine.

Adequate lynx denning habitat (minimum of 10% per LAU) has been maintained in design of prescription fires and suppression actions. Yes ☒ No ☐ Not Applicable ☐

No suppression actions planned. Prescription burns would be designed to reduce fuel-loading, thereby indirectly offering some protection to nearby denning habitats. Denning habitats are very abundant within the analysis area.

TIMBER MGMT-related Conservation Measures

Management actions (timber sales, salvage sales) do not change more than 15 percent of lynx habitat within an LAU to an unsuitable condition within a 10-year period. Yes ☒ No ☐ Not Applicable ☐

Implementation-related changes in both affected LAUs converts less than 1 percent (LAU #3020306) and less than 3% (LAU #3050401) of suitable habitat to unsuitable condition throughout the life of this project. Post-project unsuitable lynx habitat would amount to less than 2% (LAU 3020306) and less than 4% (LAU # 3050401).

In lynx habitat, precommercial thinning will be allowed only when stands no longer provide snowshoe hare habitat)(e.g., self-pruning processes have eliminated snowshoe hare cover and forage availability during winter conditions with average snowpack). Yes_____ No_____ Not Applicable__X__

Precommercial thinning is not part of this project.

FOREST ROADS/TRAILS-related Conservation Measures

On federal lands in lynx habitat, no net increase in groomed or designated over-the-snow routes and snowmobile play areas are allowed by LAU. This criteria will be satisfied.

There are no net increases in groomed or designated over-the-snow routes or play areas are proposed.

Lynx Cumulative Effects - Private land harvesting near Elk City and on private industrial lands has not impacted designated lynx habitats to any measureable degree due to the limited amount of lynx habitat in the project area. Based on the mapping, all lynx habitat in the project area is on Forest Service administered lands. Nevertheless, relatively limited acres of designated lynx habitat are impacted by this alternative despite having the greatest effects to habitats. Given the current condition of the habitat due to past fire impacts, harvests, roading, human disturbance, motorized travel and other land-disturbing activities, this alternative adds minor negative effects in addition to positive effects cumulatively to the habitat conditions for lynx by creating early-seral habitats.

GRAY WOLF

The analysis area contains habitat for gray wolves and the area is fully occupied by wolf packs. The cumulative effects of increased human use of the areas along with the increased risks of disturbance of individual wolves will have the potential to temporarily displace animals. Risks of human presence or potential for individual wolf mortality will remain relatively unchanged in the longer term. Risks of direct disturbance or displacement of individuals or packs during implementation of activities, remains present. Because of the "experimental/nonessential", status of the gray wolf these risks are not considered threatening to overall wolf populations recovery in general.

The project activities will modestly improve wolf habitat relative to increased forage for ungulate prey. Beneficial impacts for wolves will result from improvements in big game foraging habitat. Watershed restoration actions, and post-harvest slash treatments using fire are not expected to negatively impact elk or their habitats to a significant degree, except that fire use would help cycle plant nutrients back to the soil increasing vigor and nutritive quality of post-burn forage plants. Noxious weeds that could pioneer burned sites would negatively impact elk foraging areas by displacing desirable plants, but this would not be expected to be sufficiently extensive or widespread enough to be of major significance under any alternatives.

Summer Elk Habitat Effectiveness - EHE is displayed as percent of potential habitat effectiveness achieved in each Elk Analysis Unit (EAU). Note: Calculation of road effects includes trails. For the purposes of assessing relative effects of open roads and related human disturbance impacts on wolf prey and other species, the summer elk habitat analysis provides perspective.

ELK ANALYSIS UNITS

	Martin Meadows	American River	Queen Creek	Kirk's Fork	Relief Creek
FP objective	75	50	50	75	50
Existing	84	72	77	83	60

Condition					
Alternative D	87	72	80	88	58

Elk habitat effectiveness is maintained above Forest Plan standards. Most EAU effectiveness is improved over the existing conditions in every EAU except Relief Creek, due to reduced levels of road decommissioning there. In all, elk habitat effectiveness is improved by the preferred alternative (D), thus wolf prey habitat will improve.

Wolf Cumulative Effects - Human activities related to implementation will temporarily increase human disturbance risks given past, present and foreseeable future human uses of the project areas. Risks of human-induced mortality would decline but would not be completely eliminated. Some wolves may be temporarily displaced by burning, harvest, road work or other project-associated activities or their prey may be forced to change use areas for the short-term which may impact wolves to some degree. Resulting forest mosaic of age class variation and improved availability and quality of ungulate forage would improve habitat for wolves.

BALD EAGLE

Bald eagles generally use elevations well below those of the American and Crooked River Project during winter. There is relatively little direct relationship between planned activities in American or Crooked River drainages and bald eagles or their habitats. Perch trees and snags along the lower elevations of the South Fork Clearwater river (including predominantly fire-resistant ponderosa pine) would not likely be harmed by project activities.

Indirect and minor cumulative effects to water quality and fish prey habitats would potentially occur from harvest, temporary road building, noxious weeds, road decommissioning, watershed restoration actions, and post-harvest slash treatments using fire, and similar ground-disturbing actions within the project areas. The magnitude of these impacts are considered to be minor.

Bald Eagle Cumulative Effects - Planned activities would add indirect, short-term human-induced soil and water disturbances and minor aquatic habitat changes from harvests, road reconstruction/decommissioning, application of prescription fire and other ground disturbing actions to past effects on aquatic prey and habitats related to road development, timber harvest, broadscale fire exclusion, current human and vehicular disturbance levels and mortality risks associated with an already established transportation network. The overall long-term sum of all cumulative impacts would be very low.

MITIGATION ACTIONS (WILDLIFE & TERRESTRIAL TES ASSOCIATED MITIGATIONS AND DESIGN FEATURES)

Should any of the following be sighted in the project area during project implementation, the U.S. Fish & Wildlife Service and Unit biologist would be notified: lynx or a lynx den, bald eagle, new wolf den or rendezvous site, active goshawk nest. Appropriate protection measures would be implemented.

Timing of prescribed burning would be coordinated with the unit biologist, silviculturist, and fuels management specialist to achieve objectives and reduce impacts to species during important reproductive and natal period, as well as other resources.

The integrity of existing access management restrictions would be maintained within the planning area for wildlife security purposes. Current access management restrictions would apply to existing reconstructed roads after implementation of activities to maintain or improve existing access and wildlife security. No contractor or their representatives may use motorized vehicles to hunt or trap animals on a restricted road.

CONCLUSIONS

LYNX

The cumulative disturbance and/or risks of incidental human-induced mortalities or disturbances from human disturbances, harvest activities, vehicular traffic or road decommissioning in combination with vegetative changes from planned burns has the potential to affect the lynx and small amounts of lynx habitats. Effects would be slightly negative but also positive with overall probable impacts more beneficial in the long-term than harmful in the short-term. The project is in compliance with the LCAS and Lynx Science Report. As a result, a determination of "**MAY AFFECT, BUT NOT LIKELY TO ADVERSELY AFFECT**" is hereby made.

GRAY WOLF

Wolves occur within the analysis and project areas. They are abundant in the adjacent drainages as well. Wolves may travel, hunt, and reproduce within the project areas before and/or during project activities. They may be temporarily displaced by harvest and other project activities and human disturbances. Vegetative impacts and slightly improved ungulate prey habitats would definitely benefit wolves and their habitats in the longer term. Overall impacts would be beneficial, but cumulative impacts from increased short-term human disturbance levels in treated areas would result in a "**NOT LIKELY TO JEOPARDIZE THE CONTINUED EXISTENCE OF THE SPECIES OR LEAD TO DESTRUCTION OR ADVERSE MODIFICATION OF PROPOSED CRITICAL HABITAT**" (NLJCE) determination for the gray wolf.

BALD EAGLE

Based on the analysis herein, the planned activities would yield a "**MAY AFFECT, BUT NOT LIKELY TO ADVERSELY AFFECT**" conclusion.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES

The project activities will not result in an irreversible or irretrievable commitment of resources that foreclose the formulation or implementation of reasonable and prudent alternatives which would violate Section 7 (a) (2)...Jeopardy.

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